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EARLIEST EVIDENCE OF BANANA CULTURE

BY

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FOREWORD

From ancient times down to almost a century ago, the two edible members of the genus *Musa* as we know them today — the common banana (sweet fruit usually eaten raw) and the plantain (a larger fruit, less sweet and more starchy, and eaten cooked, chiefly by the inhabitants of the tropics) — are not clearly distinguished in the literature, both being used interchangeably. In consequence, it has been necessary to follow the same procedure in this brochure.

Scholars as late as the end of the nineteenth century, in translating Indian texts wherein the banana is mentioned, invariably called the fruit "plantain." (In fact, in many parts of the East today this name is often applied to any banana without regard to species or variety.)

In these translations, as well as in the Indian texts themselves, the banana plant is usually referred to as a tree. Actually, it is a rapidly-growing herbaceous perennial — probably the largest terrestial plant not having a woody stem above ground.

In this brochure the actual Sanskrit and Pali texts in which the banana is mentioned have purposely been omitted because the source of each reference to the fruit has been documented.

With respect to the statement (second paragraph of PART III — Archaeological Evidence):

> A survey of the ruins of ancient Buddhist temples of India, however, reveals the fact that in some of the sculptures the banana plant is represented as an incidental detail in the background of the carved pictures which deal with religious subject matter,

it should be explained that this survey embodies an exhaustive examination by the author of photographs and drawings of temple ruins of India, including cave-temple wall paintings, reproduced in outstanding published works.

PART I — AN ANCIENT FRUIT

The history of foods is an integral part of the history of man himself. Efforts to date those foods which have come down to us through the centuries are well worth while as each critical study brings us nearer to an understanding of our antiquities.

One of the early foods of man is the warmth-and-moisture-loving banana. It is worthy of high rank among those plant products which have had a powerful influence in shaping the destiny of mankind. Very early in the development of tropical agriculture, the banana became a staple food plant, and shortly after the dawn of civilization was cultivated over an extensive area in the tropics of the Eastern Hemisphere. High food value, a prolific yield of nutritious fruit, and adaptability to a wide range of conditions admit the banana to that outstanding group of plants on the cultivation of which the foundations of civilizations were built.

Just as wheat and barley have played their part in more temperate regions, so the banana has played its part in the tropics. The story of the banana begins in the impenetrable mists of the past. We know only a fraction of this story, but what we know of it indicates quite clearly that the edible banana was won from nature by primitive man, probably in some part of southern Asia, and then carried down through the ages by continuous cultivation.

It may be futile to indulge in speculations about the beginnings of cultivation, but it is probable that the banana was one of the first food plants to receive attention in the early stages of primitive agriculture. Botanical evidence indicates that several species of the banana group were involved and that some of these constituted an important food crop, their stems and buds having first been used. It is, indeed, not improbable that the banana was a source of human food long before the purposeful cultivation of plants prepared the way for agriculture.

The cultivated varieties of the edible banana do not usually produce fertile seeds. Primitive tribes in southern Asia and the Philippines, however, still use as food some bananas with many hard seeds and scanty pulp. The development of the edible banana from the seed-bearing varieties of scant or no food value and its

propagation from underground stems probably occurred during man's struggle against famine in the early stages of civilization.

Many authorities have written of the antiquity of the banana and its homeland. Rumphius, the greatest of the pre-Linnaean botanists of the Far East, writes:

> Although all the species mentioned are not found in one region, still varieties of them have been scattered throughout the warm parts of the earth. I believe that East India on both sides of the Ganges is their original habitat, and possibly eastern Africa. I have proved from Pliny that his *Pala* (our banana) grows in the deepest interior of India. If the plant had ever been known to exist in the western world of ancient times, I am sure that the curious Greeks and Romans who ruled the known world would have mentioned it. From India it was slowly introduced into Persia, Syria, Arabia, and Egypt, in which places travellers tell us the banana is cultivated as a rare and exotic plant in gardens.[1]

Alphonse de Candolle states:

> The antiquity and wild character of the banana in Asia are incontestable facts. There are several Sanskrit names. The Greeks, Latins, and Arabs have mentioned it as a remarkable

[1] George Everhard Rumpf, *Herbarium Amboinense*, 6 vols. (Amsterdam, 1741-50), Vol. V, 1747, p. 133. There has been no English translation of Rumpf's *Herbarium Amboinense*. The translation here given was made by Dr. H. J. Spinden.

George Everhard Rumpf, known to the scientific world as Rumphius and "Pliny of the Indies," was born in 1627 and died in Amboina in the Spice Islands in 1702, after writing the *Herbarium Amboinense*, a famous pre-Linnaean classic in botany. He had entered the service of the Dutch East India Company in 1653, living at Amboina, a small island near Ceram on the north side of the Banda Sea. Here was the port of call which dominated the spice trade upon which so much of the wealth of Holland was built at the height of her career as a marine power. Rumphius worked to present a full picture to the world of the plant life of the small tropical island. His work was well under way in 1670, with most of the drawings completed, when he became blind. He struggled along — a veritable Milton of science —until 1687, when his drawings were destroyed by fire. Not discouraged, he had his specimens redrawn, not so well as they had been for he could not see. Then, to culminate his miseries, the fair copy for the first six books of his work was lost when the ship carrying them to Holland was sunk by the French. The manuscript was finished a second time in 1701 and sent to Holland in 1704 after his death. It was printed in seven volumes between 1741 and 1755.

> Indian fruit tree. Pliny speaks of it distinctly. . . . There is an immense number of varieties of the banana in the south of Asia, both on the islands and on the continent; the cultivation of these varieties dates in India, in China, and in the Archipelago from an epoch impossible to realize; it even spread formerly into the islands of the Pacific and to the west coast of Africa; lastly, the varieties bore distinct names in the most separate Asiatic languages, such as Chinese, Sanskrit, and Malay. All this indicated great antiquity of culture, consequently a primitive existence in Asia, and a diffusion contemporary with or even anterior to that of human races.[2]

Popenoe asserts:

> There seems little reason to doubt that the banana was one of the first foods of man, and that it was one of the first plants cultivated. . . . If Man appeared in the Indo-Malayan region, as is widely believed at present, it seems natural to seek for the origin of the banana in the same region; and such a location for it is accepted by most botanists. . . . [Its generic name] *Musa* comes to us from the Sanscrit *Moca*.[3]

Cheesman says:

> We return yet again to south-eastern Asia for the origins of the bananas and plantains, the nearest wild relatives of which are indigenous in forests from north-eastern India down through the Malay Peninsula and Archipelago to the South Sea islands. These wild relatives have fruits full of hard seeds and very little edible pulp, but the seedless kinds are clearly developed from them, and it is likely that the development took place before the dawn of history. It is likely also that it took place independently in several centres, one in India, one in the Indo-Malayan peninsula, and one further east in the islands of the Pacific. Most of the varieties in the New World are members of the Malayan group, and they moved westward in much the same manner as sugar cane and citrus. More strictly tropical than those plants, however, they took a more southerly route, overland across Central Africa rather than coastwise by way of the Mediterranean.[4]

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[2] Alphonse de Candolle, *Origin of Cultivated Plants* (New York: D. Appleton Co., 1885), pp. 306-7.

[3] Paul Popenoe, "Origin of the Banana," *The Journal of Heredity*, V, 6 (June, 1914), 273.

[4] E. E. Cheesman, "The History of Some Well-Known West Indian Staples," *Tropical Agriculture*, XVI (1939), 105.

Man early discovered that the dried roots and suckers of the banana plant, even though carried long distances, would flourish in new localities provided soil and climate were suitable.

We can now define approximately the original location in which banana culture started and, in a general way, the historical sequences in which the plant was distributed east and west by cultivation and other human agency until it finally encircled the globe.

The first home of the edible banana was pretty clearly the humid tropical area of southern and especially southeastern Asia, together with Ceylon and the large islands of Indonesia and Malaysia up to, but not including, New Guinea. There is every reason to believe that the banana has been a staple food since prehistoric times in those moister parts of India lying generally east of Bombay, in Siam, Burma, Indo-China, and the district of Canton in China proper, and the same doubtless holds true of the large populous islands southeast of Asia, including Sumatra, Java, Borneo, Celebes and Formosa, running north to and including the Philippines.

Over all these wide territories the banana flourishes under cultivation and also in a semi-wild state, and there are numerous species of *Musa* with or without seeds, some wild, some partly domesticated. In fact, there are more different kinds of bananas found in this region than anywhere else in the world.

The first high civilizations developed by man occurred in semi-desert situations. But the history of that part of the world representing the natural habitat of our fruit — where nature is prolific to a fault — is obscure and difficult to construct as man lagged in the matter of cultural evolution. Later, however, high cultures did arise in these tropics of the Far East, perhaps as a result of mass migrations of tribes who streamed down from the north with superior arts and disciplines and replaced the original non-progressive populations.

Like many of our other foods, the earliest history of the banana is to a great extent legendary. One of these legends concerns a species, a member of which is the most widely consumed banana in the tropics although but little exported, namely, *Musa paradisiaca* (Fruit of Paradise), the plantain, or cooking banana as we know it today. It derives its name from an ancient legend that the "tree" flourished in the Garden of Eden, where the fruit was the source of good and evil. A classic example of the influence of this

legend is found in the Koran (dating back from the 7th century A. D.) where the banana plant is referred to as the paradise tree.[5]

A subspecies, *Musa sapientum* (Fruit of the Wise Men), in which classification the principal banana of commerce belongs, derives its name from the legend that the sages of India reposed in its shade and refreshed themselves with its fruit. There would appear to be some basis for this particular legend in view of the description given by Theophrastus of a certain fruit of India, which in the consensus of scholarly opinion is our banana.

In any event it is obvious that factual evidence of the banana's early history is essential to give us a clearer concept of what is at best a more or less obscure picture.

Of the homeland region India is of prime importance to the student of culture history because in its arts we find the first evidence of banana culture.

[5] M. Kasimirski, *Le Koran* (*Les Livres sacrés de l'Orient*) (Paris: G. Pauthier, 1840), p. 718. See also Graf A. E. Schack and A. Baumgartner, *Geschichte der Weltliteratur*, I (1901), p. 364.

PART II — LITERARY EVIDENCE

India

Let us first consider the evidence of a literary character. The fact that the banana is not mentioned in the earliest literature of India proves little or nothing, the vocabulary of the Rigveda, a collection of about two thousand hymns used in ritual about 1200 B. C., being naturally limited by its liturgical character. These poems were used by the early Aryans who invaded India between 1500-1200 B. C. and who originated in cold lands beyond the banana's habitat.

References to the banana, however, are found in the Sacred Books of the East, which are generally based upon ancient sources. The banana plant is sacred to the Patrikas, or nine forms of the Goddess Kali, and is especially worshipped on the third Sanskrit Shrāvana or Hindi Sāvān (July-August).[6]

The principal Indian names of the banana plant are: Sanskrit *kadalī* (more rarely *kadala, kandalī*) and *mocā* (the latter, some writers assert, is the source of Arabic and Persian *mauz* or *mūz,* Latin *musa*),[7] and more rarely *rambhā, suphalā, bhānuphalā;* Pali *kadalī* and *mocā*; Nepalese and Sinhalese *kadalī*; Hindi and Hindustani *kelā.*

The earliest literary references of Indian origin appear in the Epics (*Mahābhārata* and *Rāmāyaṇa*) and in the Pali Buddhist canon. Part of the Epics and cononical Pali books antedate the Christian era by at least five or six centuries. The *Mahābhārata* is an anonymous work whose compilation extends over centuries; while the *Rāmāyaṇa* is in the main the work of one author, viz: Vālmīki. The canonical Pali books have no authors and are anthologies which gradually developed in the community.

A drink made from the banana (*mocā-pāna*) is mentioned in Vin. I. 246 *Mahavagga* VI. 35. 6 as one of the eight fruit and honey beverages allowed to Buddhist monks. It is impossible to be

[6] George C. M. Birdwood, *The Industrial Arts of India,* South Kensington Museum Art Handbooks, 2 vols. (London, 1895), Vol. I, pp. 87, 89 and 90.

[7] See Part V for a discussion as to origin of the botanical name *Musa.*

definite as to dates; the Buddhist books of monastic rules may be one or two centuries B. C.

In the Pali literature (see *kadalī* and *mocā* in the Pali Text Society's *Pali-English Dictionary*) and in some Sanskrit contexts the banana, inasmuch as the stem is not woody but only made up of superimposed leaf-sheaths, is a symbol of unsubstantiality and fragility; and, since the plant is cut down after the fruit is harvested — and thus in a manner destroyed by its fruit — it becomes a simile of the bad man destroyed by the fruit of his own deeds. On the other hand, because of its smoothness and roundness the stem becomes, as also in the later classical Sanskrit poetry, a symbol of the beauty and smoothness of women's limbs. The comparison with women's thighs is a stock phrase, but is sometimes rejected because of the coolness of the stem. The whole plant was used in street decoration and in the construction of triumphal arches on great festivals; pieces of the leaves served as plates to eat from. Both of these uses survive to the present day.

The following are some further early references to the banana found in Indian literature:

Vinayapitaka. Cullavagga VII. 2. 5. About 350 B. C.

Merely a passing reference to the banana (*kadalī*) in a list of other fruits.

Jātaka.

Stories at least as old as second or third century B. C., although the date of compilation was in the early centuries A. D. (Some scholars assert that no date can be given for any Jātaka).

Sarabhanga (J. 11. 130). Plantain trees (*kadalī*) are set up as targets for an archer.

Chaddantajātaka. A grove of plantains (*kadalī*) is mentioned with fruit as big as elephant's tusks.

Milindapanhā. Probably compiled in the first century A. D.

2. 3 (p. 166 of V. Trenckner's edition). Plantains are referred to as dying when they flower.

Kālidāsa, *Meghadūta.* Dated 1-3 century A. D.

Uttaramegha. 14. "On the edge of that (pool) is a pleasure

mount, its summit adorned with beautiful emeralds, lovely to see, enclosed by plantains."

Kālidāsa also refers to the banana in his *Kumārasambhava,* I. 36.

In the classical poetry of the first millennium A. D., the banana is met with in descriptions of natural scenery. For example:

Mṛcchakaṭikā, attributed to King Śūdraka.

Date unknown — possibly 2nd century A. D.

Harvard Oriental Series, Vol. 9, p. 10. Translation by A. W. Ryder.

Courtier, Vasantasenā speaking —

"Stop! Stop!
Why should you tremble, should you flee,
A-quiver like the plantain tree?"

Amarasiṃha, *Amarakosha.* A lexicon. Dated 6-9 century A. D.

II. IV. IV. In a verse in this section on useful plants kadalī is listed with its synonyms *vāraṇabusā, rambhā, mocā* as the fruits rich in fibres.

Medinīkara, *Medinī(kosha).* A lexicon. 13th or 14th century A. D.

Kadalī is listed in the Lantavarga section.

(The word is also listed in several other old Sanskrit lexicons, none antedating *Amarakosha,* however).

Medicinal uses are referred to in Suśruta's well-known treatise, the *Suśruta-samhitā,* certainly antedating the 4th century A. D.

Chapter 1, Cikitsā-sthāna. "A compound made of the oil of Bhallātaka (cashew nut) mixed with the milky juice of Snuhi (a kind of spurge) should be used by an intelligent physician as a depilatory measure. As an alternative, the burnt ashes of the stems of plantain leaves."

Chapter XX, Sūtrāsthāna. "The fruits of a plantain tree should not be simultaneously eaten with Tāla (fan palm) fruit, milk, or whey.

Chapter XXXVIII. *Mocā-rasa* — banana — juice is mentioned as favorable to the healing of ulcers and dysentery where the stools are lumpy and mucous.

Chapter XXXIX. Kadalī is mentioned as a drug which soothes the deranged bile.

Chapter XLVI. *Mauca* (adjectival form of *mocā*) denoting a preparation of *mocā*, is a remedy for haemoptysis, an aphrodisiac, and improves appetite.

Chapter XLVIII. Water boiled with *mocā* is mentioned as being used for thirst due to wounds.

The Uttaratantra (Appendix) of Suśruta, Chapter XXI. The expressed juice of the banana used lukewarm as an eardrop is a remedy for earache.

Graeco-Roman References

So much for the literary evidence of India. The Greeks under Alexander after they had crossed the Indus in their conquest of India in 327 B. C. were impressed by a fruit which is obviously our banana. And we now make mention of a Greek reference to the banana as a strange fruit of far-away India because it not only corroborates the foregoing but constitutes in itself an important item of evidence as to the early culture of bananas in that country.

Theophrastus, a Greek philosopher, whose *Enquiry into Plants* is considered to be the first botanical work following a scientific method, has been given credit for the first reference to the banana as a strange fruit of far-away India. This Theophrastus was born in Eresus in Lesbos in 370 B. C. and became the favorite pupil of Aristotle and author of many books, only a few of which have survived.

Sir Arthur Hort writes as follows in the introduction of a translation of Theophrastus' *Enquiry into Plants*:

> To Alexander indeed he was greatly indebted; the great conqueror had not been for nothing the pupil of the encyclopaedic Aristotle. He took with him to the East scientifically trained observers, the results of whose observations were at Theophrastus' disposal. Hence it is that his descriptions of plants are not limited to the flora of Greece and the Levant; to the reports of Alexander's followers he owed his accounts of such plants as the cotton plant, bayan, pepper, cinnamon, myrrh and frankincense.[8]

In one place Theophrastus mentions four fruit trees of India. The brief description associated with the banana is as follows:

[8] Theophrastus, *Enquiry into Plants and Minor Works of Odours and Weather Signs*, trans. by Sir Arthur Hort, 2 vols. (London: W. Heinemann, 1916), Vol. I., Introduction pp. XIX-XX.

> There is also another tree which is very large and has a wonderfully sweet and large fruit; it is used for food by the sages of India who wear no clothes.[9]

Obviously this description is not enough to identify the banana with certainty, yet it was accepted by the great Swedish botanist Linnaeus when he applied the term *Musa sapientum*, "Fruit of the Wise Men," to the banana. Rumphius, whom we previously mentioned, thought that Theophrastus had this plant in mind.

One thing is certain enough: some four centries later the Elder Pliny, whose *Historia Naturalis* was published about 77 A. D., undoubtedly used Theophrastus as a source, combining the latter's description, which we have just given, with that of another tree and then adding some new information. The second tree of Theophrastus had been described by him in these words: "There is another tree whose leaf is oblong in shape like the feather of an ostrich; this they fasten to their helmets, and it is about two cubits long."

Out of these two parts, with additional information, Pliny made the following statement:

> There is another tree in India, of still larger size, and even more remarkable for the size and sweetness of its fruit, upon which the sages (Brahmins) of India live. The leaf of this tree resembles in shape the wing of a bird, being three cubits in length and two in breadth. It puts forth its fruit from the bark, a fruit remarkable for the sweetness of its juice, a single one containing sufficient to satisfy four persons. The name of this tree is *pala* and of the fruit *ariena*. They are found in the greatest abundance in the country of the Sydraci, a territory which forms the extreme limit of the expedition of Alexander.[10]

Now there are several reasons for believing that this long-distance impression should be associated with the banana rather than the jack-fruit as several critics have done, including Yule and Burnell.[11] The banana frond does resemble an ostrich plume in

[9] *Ibid.*, p. 315.

[10] The Elder Pliny, *Historia Naturalis*, Lib. XII, Cap. 12 (6). *The Natural History of Pliny*, trans. by John Bostock and H. T. Riley, 5 vols. (London: Henry G. Bohn, 1855-57), Vol. III, p. 110.

[11] Henry Yule and Arthur Burnell, *Hobson-Jobson Being a Glossary of Colloquial Anglo-Indian Words and Phrases, and of Kindred Terms;*

shape and this does not hold true of the jack-fruit tree. The statement that one fruit is enough for four persons would certainly hold true of the bunch if not of a single finger. The name *pala,* which Pliny gives, is like a name for the banana used on the Malabar coast of India, a coast reached in Pliny's time by Roman ships sailing across the Indian Ocean from the Red Sea. (Garcia da Orta gives *palan* as the Malayalam word used in the region of the Portuguese colonies.) There is the final point that the plant was first met with in the extreme limit of Alexander's expedition.[12] He crossed several rivers of the Punjab and reached territory in which the banana undoubtedly was growing.

At the end of his Book 12 Pliny mentions Theophrastus first among his foreign authorities. He also names two of the companions of Alexander whose writings were still extant in his day.

China

To present the picture of literary evidence on a broader scale, let us now turn attention away from India for a moment and

Etymological, Historical, Geographical, and Discursive, 2nd. ed. (London: John Murray, 1903), "Banana" p. 56; "Jack" p. 440; "Plantain" p. 715.

[12] The hold of the Greeks on that portion of India which Alexander conquered was of short duration, but subsequently several ambassadors were sent to that country. Alexander passed down the Indus River in boats built in the Punjab and his Admiral Nearchus made the sea journey home. Nevertheless, there is no important evidence of trade with India until we approach Roman times. (See Strabo's accounts of these voyages.) During Roman times actual political control did not reach to India, but trade did, especially after the discovery of sailing with the monsoon or trade winds across the Indian Ocean, a discovery that is accredited to the Roman Captain Hippalus about 45-50 A. D. Then the captains deserted the coastline route and sailed boldly across the sea to reach the coast of Malabar and the Island of Ceylon. It is known that Roman captains finally rounded India, crossed the Bay of Bengal, passed through the straits by modern Singapore and actually reached the coast of China — about 200 A. D.

But we look in vain for any mention of the banana reaching western Asia or eastern Africa in Roman times, either in the works of such geographers as Eratosthenes, Strabo, and Ptolemy, or in such other works dealing with India and the Indian trade as Arrian's *Indica or the Periplus of the Erythraean Sea* (the Greek name for the Indian Ocean), the latter a trader's handbook of about 80 A. D. Even if we must imagine that western sailors met strange fruits in strange eastern ports, there is no indication that they brought the plants yielding these fruits home to the west.

consider China, i. e., southern China. As previously stated, the banana is probably indigenous to the Canton section of China, although we find no reference to the fruit in the earliest Chinese literature. This omission is explained by the fact that prior to the Christian era Chinese civilization centered in the Yellow and Yangtze River valleys and early Chinese written records describe those parts of the country almost exclusively. Consequently the banana, a tropical and sub-tropical plant, was probably unknown to the ancient Chinese. Only at the beginning of our era did Chinese civilization move southward and only about the second century did descriptions of southeast China appear. Though the banana may have been for centuries a common food in the Canton region, it could not be described until northerners began to settle there.

Disturbances in North China after the second century A. D., which continued more or less for several centuries, caused intermittent migrations to the south. The result was that Chinese civilization extended to provinces farther south, such as Kwangtung and Kwangsi. Poets and men of letters began to make notes of things in the south, and native southern authors began to appear. One of the earliest of such authors, a native of Kwantung, was Yang Fu, who was an official at the end of the Later Han Dynasty, which flourished about the second century. He wrote a work on the Kwangtung region entitled *I-wu chih*, or *Record of Strange Things*. As the title indicates, this work describes the unusual things of South China — unusual, that is, in the eyes of the northern readers of his day. He gave a description of the banana plant — here called *pa-chiao*, which is perhaps the earliest description of that plant in Chinese works. We know it to be the same plant because he also gave it the alternate name, *kan-chiao*. The following is a translation of Yang Fu's description:

> *Pa-chiao* has leaves as large as mats. Its stem is like a [bamboo] shoot. After boiling, the stem breaks into fibres and can be used for weaving cloth. Women weavers make this fibre into fine or coarse linen which is known now as *chiao-chih* [Cochin-China] linen. The center of the plant is shaped like a garlic-bulb and is as large as a plate [?]. There the fruit grows and holds the 'stem.' One stem bears several tens of fruits. The fruit has a reddish skin like the color of fire and when peeled the inside pulp is dark. The pulp is edible and

> is very sweet, like sugar or honey. Four or five of these fruits are enough for a meal. After eating, the flavor lingers on among the teeth. *Kan-chiao* is another name for it.[13]

Being himself a native of Kwantung, where bananas and plantains are produced, Yang Fu undoubtedly wrote from direct knowledge.

We could quote several other Chinese authors of this early period who report on the bananas of Southern China. We will, however, content ourselves with one final reference to a Chinese writer of a later period, Meng Hsin, who, discussing the medicinal effect of the "banana fruit," in his *Shih-liao pên-ts'ao* of 706 A. D., wrote:

> When eaten raw, it quenches thirst and lubricates the lungs. After it is cooked by steaming, dry it in the sun until it bursts, then grind the pulp to powder. Thus prepared, it is taken to stimulate the circulation of the blood and to strengthen the marrow of the bones.[14]

There are a number of earlier herbals, or *pên-ts'ao* — a valuable class of Chinese books treating plants for medicinal purposes — in which bananas are mentioned, the first having been compiled in the first or second century A. D.

[13] Yang Fu, *I-wu chih* (*Record of Strange Things*), (ed. in the collectanea *Ling-nan-i-shu* of 1831), p. 12a.

[14] For further information on this point see the author's article "The Banana in Chinese Literature," *Harvard Journal of Asiatic Studies*, V, 2 (June, 1940), 176.

PART III — ARCHAEOLOGICAL EVIDENCE

India

With respect to archaeological evidence one would not expect to find parts of the banana plants surviving in humid regions owing to quick decay. On the other hand bananas seldom flourish in arid regions even with careful irrigation. While considerable vegetable remains have been recovered at Mohenjo Daro, a ruin belonging to the early Indus civilization, no leaves or stems of bananas were noted. Nor have they been noted at Taxila in northern India, famous in the story of Alexander. Yet Hsüan Tsang, the Chinese pilgrim, observed bananas growing a short distance east of Taxila in lower and moister ground a thousand years later.

A survey of the ruins of ancient Buddhist temples of India, however, reveals the fact that in some of the sculptures the banana plant is represented as an incidental detail in the background of the carved pictures which deal with religious subject matter.

The earliest examples of these banana representations in stone are sculptured details on the Stūpa of Bharhut (circa 175 B. C.), of Sanchi (circa 100 B. C.), and of Mathurā (dating from the second to third century after Christ). These Buddhist stūpas are among the earliest and most beautiful edifices in stone to be found throughout India and are illustrative of early Buddhist legend and history.

Sir Alexander Cunningham, who discovered the remains of the Stūpa of Bharhut in 1873, dated this Buddhist monument about the third century, B. C., but Coomaraswamy and other authorities on Indian art have given it a date of about 175 B. C. Cunningham's outstanding and profusely illustrated publication on this great stūpa contains many splendid plates of numerous sculptures which ornament the temple.

The reader's attention is called to two of these plates [15] which show banana representations in stone — probably the earliest yet

[15] Alexander Cunningham, *The Stūpa of Bharhut* (London: William H. Allen Co., 1879), Plate XLIV, fig. 6 and Plate LVI, fig. 2.

reported — one of the banana plant (leaf) and the other of the banana plant with hanging fruit.

Cunningham writes:

> The Trees represented in the Bharhut Sculptures are as numerous and varied as the Animals but partly I believe from want of skill in the sculpture, and partly I fear from my own ignorance, there are a considerable number of them that remain unidentified. Some of the trees can be recognized at a glance.[16]

He then identifies 18 separate trees, his No. 15 having this description: "The Plantain Tree with its broad straight leaves appears to be represented in Plate XLIV, fig. 6." This refers to the rich decoration of the railing in which scenes are presented in a row in the spaces of vinelike border. In the detail mentioned by Cunningham we see a group of five human figures, a basket before them, and in the background two trees, one having branches and small leaves and the other having large erect leaves of the banana type.

His Plate XLVI, fig. 2, however, has by far the greatest interest for us because this particular sculpture depicts not only the banana plant but the fruit itself. It shows a man seated on the ground before a basket. Several trees appear in the background and behind and to the left of the seated man are two banana plants with the pendant fruit. The subject of the picture, according to the inscribed label, is the Uda Jātaka.

At Sānchi, where according to Maisey are located the most important of the many Buddhist memorials in India, now dated somewhat later than Bharhut, say about 100 B. C., we find a sculpture on which banana plants are pictured in the pleasure garden of Indra. They are shown in Plates XIII, fig. 1 and XXII, fig. 1 of Maisey's book on these ruins. The author in describing the former writes:

> It shows seven ascetics or priests — without their upper scarves — who appear to be either completing a Sthūpa in a square enclosure or to be about to build some other structure near it. . . . The Sthūpa stands among five trees; the species of which, save the plantain, I am unable to determine. . . .

With respect to his Plate XXII, fig. 1, Maisey states in his description:

[16] *Ibid.*, p. 47.

> "Five trees are represented: among which are the plantain, the bodhi of Vipaswi, and the jeweled Kalpa darma, or Pārijāta, of Indra's paradise. . . ."[17]

At Mathurā, a still later structure, two young banana plants appear in one of the sculptures — to the left and to the right. This particular sculpture appears in the upper right section of Plate XXVIII of Smith's book *The Jain Stūpa and Other Antiquities of Mathurā.* The author writes:

> Torana Pillars: Each pillar is divided into a series of compartments, one above the other, and each compartment contains the representation of a domestic scene.[18]

In later times Indian sculpture becomes highly conventionalized in its decoration. However, a new method of representing natural scenes is found in fresco paintings. Of these the earliest and most realistic are found in the cave-temples of Ajanta, located about 230 miles northeast of Bombay. The Ajanta paintings are copied in Griffiths' magnificently illustrated book.[19] The author points out:

> Historically the caves form two groups. Near the centre of the crescent are the five earliest: Nos. XIII, XII, X, IX, VIII — in the order of their age.[20]

In these particular cave-temples, now dated about 100 A. D., no representation of banana plants are found.

A second series, however, is dated as falling within the 4th and 5th centuries A. D., and some of these later cave-temples furnish clear pictures of banana plants, which often form a frame to the central religious scene. The author further writes:

> The banana naturally is a favorite subject. Plate 31 gives the fully expanded leaf tattered and rent by the wind and the half-opened leaf-sheath with its vigorous upward growth. . . .

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[17] For these two citations see F. C. Maisey, *Sanchi and Its Remains, with an Introductory Note by Sir Alexander Cunningham.* (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1892), pp. 46 and 58.

[18] Vincent A. Smith, *The Jain Stūpa and Other Antiquities of Mathurā* (Allahabad: Government Press, 1901), p. 29.

[19] John Griffiths, *The Paintings in the Buddhist Cave-Temples of Ajanta, Khandesh, India,* 2 vols., published by Order of the Secretary of State for India in Council (London, 1896), Vol. 1, plate 31 (from Wall Painting, Cave II); Fig. 67 (from Wall Painting, Cave IX).

[20] *Ibid.*, p. 5.

> This picture is on the left wall of the small chapel to the right of the shrine (Cave II) and is in exceptionally good preservation.[21]

A particularly good drawing of a young banana plant appears in Fig. 67 — from Wall-Painting, Cave IX.

Although we are not so concerned with Indian art of a later period, it is interesting to note that the banana plant appears in some of the Mughal and Rajput paintings of the sixteenth and seventeenth centuries. These exquisite Indian paintings were chiefly used as book illustrations.

As Indian religions spread to Java and other regions within the believed-to-be homeland areas of the banana, there were migratory bodies of priests and monks. It is possible that in this gradual migration certain species and varieties of the banana, indigenous only to India, were transported.

Java

In Java we find stone representations of the banana plant on a number of the sculptured panels of the Stūpa of Borobodur, a Buddhist monument of gigantic proportions, dated about 850 A. D. We cite two examples from the many plates illustrating an article by A. Steinmann.[22] One plate is entitled *Pisang en Manga* [Banana and Mango]; the other carries the title *Bezoek aan den Pisang-tempel* [Visit to the Banana Temple] and shows a banana plant growing on the platform before the door of the temple. The latter is especially interesting because of its significant title.

[21] *Ibid.*, p. 17.

[22] A. Steinmann, "De Op Den Boroboedoer Afgebeelde Plantenwereld [Plant World as Depicted on Borobodur]," *De Tropische Natuur*, Jaarg XXIII (1934), 198-224, plate II (a) and (b).

PART IV — MIGRATIONS FROM ORIGINAL HOME

Pacific Islands

At this point we digress from our main subject, Earliest Evidence of Banana Culture, to report briefly on the most important of the banana's various migrations.

Border conquests and pressure of population due to the exhaustion of the soil in the ancient regions of civilization were the probable causes for the great migrations of South-Asiatic peoples eastward over the islands of the Pacific. It is difficult to date these migrations, which seem, however, to have been stretched out over many centuries; the earliest, according to the consensus of scientists, was about the time of Christ. By these migrations bananas, with other products of agriculture, were undoubtedly carried far into the Pacific. The earliest explorers found them cultivated in Hawaii and in Easter Island, the latter being a dot of land nearly two thousand miles distant from the nearest other human habitation.

Africa

Although not indigenous to Africa, there is no doubt that the edible banana reached the eastern coast of Africa many centuries ago. Certain Uganda tribes have depended largely upon this crop for their food supply for many centuries. At the beginning of the Christian era Hinduized Malays of Sumatra had colonized Madagascar, and due to this migration, as well as to the commerce of the early Arabs with India and East Africa, the edible banana was undoubtedly brought to the east coast of the Dark Continent. The introduction of the fruit from Indonesia may or may not have been earlier than the first Arab trade, which is shrouded in darkness. During the first ten centuries of the Christian era when Arab trade with India flourished the edible banana was well established on the east coast of Africa and slowly made its way inland.[23]

[23] The Arabs, long before any European peoples had set up any commercial posts in the Far East, had established trade settlements on the Malabar Coast of India, in Ceylon, on the Malay Peninsula and even at Canton, China. Arab ships also brought goods from the Far East destined for southern Europe; these goods were discharged at Persian Gulf and Red

The Arabs were instrumental in distributing the fruit across equatorial Africa. Not only did they exert a strong influence on the peoples of the Guinea Coast by reason of their settlements in Morocco and the Sudan, but they engaged in ivory and slave trade across Central Africa, which is good banana territory. The banana was gradually carried westward by the native tribes and was well established on the Guinea Coast when the Portuguese first explored there in the years 1469 to 1474.

Also, the Arabs introduced the banana into the Holy Land and northern Egypt, where it seems to have been unknown before the Mohammedan Conquest (650 A. D.). One of the earliest Arabic references to the banana is found in verses of Masudi, a poet who died in 956 A. D. He extols a dish called *kataif,* an old Arabian delicacy popular in Damascus, Constantinople, and Cairo, which was a confection of almonds, honey, and bananas swimming in nut oil. Various Arabic authors wrote on the medicinal and food properties of the banana, which they called *Musa.*

Canary Islands

The Portuguese,[24] who were the greatest navigators of their day, without doubt carried the banana to the Canary Islands along with slaves from the Guinea coast shortly after they explored this region. The aboriginal population of these islands had long been out of touch with the mainland when they were rediscovered about 1341. The conquest began in 1402 and at this time the banana was quite unknown and barley was the staple food.[25]

This was a notable and interesting stage in the westward journey, not only in view of the present importance of the Canary Islands in banana culture and export, but also because here, according to unquestioned historic evidence, is the point of departure of the banana for the New World.

Sea ports, whence they were transported overland to the Mediterranean Coast.

[24] The Portuguese were in their day the most important distributors of cultivated plants. They were the first European people to found colonies in India, China, the Spice Islands, and on the east and west coasts of Africa as well as in Brazil. They undoubtedly were the first to bring bananas not only to the Canary Islands but to Madeira, the Azores, and Brazil.

[25] Ernest A. Hooten, *The Ancient Inhabitants of the Canary Islands,* Harvard African Studies, vol. VII (Cambridge: University Museum, 1925), p. 69.

New World

The report of the introduction of the banana to the New World, following Columbus, is definite and complete. Oviedo, after visiting the West Indies and Central America, wrote the first natural history of the New World, universally referred to at that time as Las Indias (the Indies). He expressly states that Friar Tomás de Berlanga brought a fruit, which is obviously the true banana, from the Canary Islands to Santo Domingo, in 1516. He begins:

> There is a fruit here which is called 'Platanos' . . . nor did they use to be in the Indies but were brought hither. . . . One hears on all sides that this special kind was brought from the Island of Gran Canaria in the year 1516 by the Reverend Father Tomás de Berlanga of the Order of Predicadores, to this city of Santo Domingo [now Trujillo] whence they spread to the other settlements of this island [Hispaniola or what is now the Dominican Republic] and to all other islands peopled by Christians. And they have even been carried to the mainland and in every party they have flourished. . . . The first ones were brought, as has been said, from Gran Canaria, and I saw them there in the very monastery of San Francisco in the year 1520. Also they are in the other Fortunate or Canary Islands and I have heard say that they are found in the city of Almeira in the kingdom of Granada. They say that this plant passed thence to the Indies and that to Almeria it came from Levant and from Alexandria and East India.

Oviedo, in his concluding references to Berlanga, states:

> He was appointed Bishop of Castilla del Oro en la Tierra-Firme (Panama) because he is in truth a very religious person and of great example, and such an honor well befits him, because his doctrine has been very beneficial in these parts for things referring to the service of God our Lord, and for such he was selected, he being modest, never having requested or solicited the honor.[26]

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[26] Gonzales Fernandez de Oviedo y Valdés, *Historia general y natural de las Indias, Islas y Tierra Firme del Mar Oceano*, 4 vols. (Madrid: Printing House of the Royal Academy of History, 1851-55), Vol. I, pp. 290-293.

Oviedo's first work was published in Toledo in 1526. A second edition was issued in Seville in 1535. There has been no English translation. The translation here given was made by Dr. Herbert J. Spinden.

Gonzales Fernandez de Oviedo y Valdés, Spanish historian, was born at Madrid, in August, 1478. Educated at the Court of Ferdinand and Isabella, in his thirteenth year he became page to their son and was present at the

In the long and varied history of the banana there is no more dramatic picture than that of this missionary-pioneer setting out on his long and perilous voyage to the New World and carrying with him the plant whose food value had been proved for centuries. Thus he provided that his spiritual work might endure by giving the people of his mission the means to live. The good padre little realized how his foresight pointed the way to those who, centuries later, made their broad plantations contribute so much to the economic support of the American tropics.[27]

siege of Granada and there saw Columbus previous to his voyage to America. In the spring of 1493 being at court assembled in Barcelona he witnessed the triumphant entry of Columbus after his first voyage to the New World. In 1514 he was appointed supervisor of gold smeltings at San Domingo. On his return to Spain he was appointed historiographer of the Indies. He paid five more visits to America before his death at Valladolid in 1557. In all Oviedo resided in the New World upwards of 34 years and filled many high positions there.

[27] Tomás de Berlanga was born in the little town of Berlanga, Spain, about 1492. He was professed on March 10, 1508 in the Dominican Order at the convent of San Esteben of Salamanca. He left San Esteben for Espanola (Hispaniola) 1515-1516. Upon arrival there he became the first canonically elected prior of the Dominican convent in the city of Santo Domingo and was ordained by Friar Bartolomé de las Casas, celebrated in history as the staunch champion of the Indians of the New World. In 1530 he was named Bishop of the new See of Panama, but did not take possession of the See until 1533. He governed for only four years, resigning in 1537. He was a good administrator and an active and tireless worker. Under his direction churches and chapels arose all over the diocese. Apart from his spiritual activities he was extremely interested in the improvement of agricultural methods and in teaching these methods to the natives. Under his direction the cultivation of bananas, oranges, lemons and other fruits was fostered. Berlanga's idea was to make Panama, which lacked gold, to be prosperous through the richness of its soil. Berlanga's vast and indefinite diocese — the Bishopric of Panama — embraced everything discovered and to be discovered on what is now the west coast of South America. When the Spanish crown began to notice signs of trouble between Pizarro and Almagro about their respective territorial limits, it sent Bishop Berlanga to Peru with power to arbitrate between the two on any question at issue. He died in Spain about 1547. It is of interest to note that in certain parts of South America and the Caribbean islands the banana was known as — and even to this day is sometimes called — "dominico" in honor of Berlanga's order or in honor of himself; the word "dominico" means Dominican.

When the banana in its western travels reached the Pacific shores of Middle America, its journey around the world was complete. From the Indo-Malayan region, it migrated with man across the Indian Ocean to Africa, through the four thousand miles of the Dark Continent, then on to the Canary Islands and across the Atlantic to the West Indies and Middle America, meeting the lesser eastern migration from southern Asia to the islands of the Pacific.

PART V — ORIGINAL AND RELATED NAMES

With respect to the migration of food plants from their native home, the possible relationship or similarity between the original name and later names bestowed upon them in adopted lands may prove to be not only interesting but significant. That this is true of the banana will be readily seen in the following discussion of the origins of the name "Musa," "Banana," and "Plantain."

The Botanical Name "Musa"

We previously reported that the earliest references to the banana are of Indian origin and appear in the Epics and also in canonical Pali books, parts of both of which antedate the Christian era by at least five or six centuries. The word *moca,* meaning banana and appearing therein, is both a Sanskrit and Pali word. It also occurs in Sanskrit dictionaries.

Despite this fact it is believed by some to be a late word perhaps derived from the Arabic. This is because the Sanskrit word is not found in the most ancient literature of India. When we remember, however, that this most ancient literature comes from the direction of Persia, from a generally arid and highland country lying well outside the natural habitat of the banana, this lack of reference does not appear so remarkable. Another reason for this common derivation (which is accepted, for instance, in the great *Oxford Dictionary* of Gilbert Murray and in *Webster's International Dictionary*) is that the banana reached the Near East through Arabic agencies while in the language there exists a convenient explanation of the name in a basic sense of "taste and flavor." But this derivation appears to have no greater force than the fanciful one found in several medieval writers that *musa* was so called because the banana was the favorite food of the Muses, or the statement in Bailey's *The Standard Cyclopedia of Horticulture* that *musa* was so named in honor of Antonio Musa, physician to Octavius Augustus, 63-14 B. C., first Emperor of Rome.

The crucial evidence that *moca* (mocha) was an Indian word meaning banana, used in the humid territories of northern India before the time of Arab contacts, is found in the writings of the famous Chinese pilgrim Hsüan Tsang. He traveled to India in

the first half of the seventh century, remaining there about sixteen years (629-645 A. D.). He first met with the banana in India, with a name he transliterates into Chinese as *mao-che*, in the little state of Pun-nu-tso, or Punats, on the upper Jhelum, then tributary to Kashmir.

We quote from three passages of his writings, reporting on what he saw in this strange, vast "Western" country, in which the Indian banana is mentioned.[28]

> The climate and the quality of the soil being different according to situation, the produce of the land is various in its character. The flowers and plants, the fruits and trees are of different kinds and have distinct names. There is for instance [he then gives a number of the fruits] the *Moche* fruit (Mauche). . . . It would be difficult to enumerate all the kinds of fruit; we have briefly named those most esteemed by the people.
>
> . . . *mochas*, etc., flourish and are grown in great quantities like woods; they are prized on account of their taste. The climate is warm and damp. The people are brave.

Later, speaking of the native state of Fei-she-li, or Vaisali in the Ganges valley, he says:

> The soil is rich and fertile: flowers and fruits are produced in abundance. The *amra* fruit and the *mocha* (banana) are very plentiful and much prized. The climate is agreeable and temperate. The manners of the people are pure and honest. They love religion and highly esteem learning.

We may safely conclude that Hsüan Tsang put down the native

[28] Samuel Beal, *Si-yu-ki. Buddhist Records of the Western World Translated from the Chinese of Hiuen Tsiang (A. D. 629)*, 2 vols. (London: Trübner Co., 1884). The three references are respectively, Vol. I, p. 88; Vol. I, p. 163; and Vol. II, p. 66.

The name of this Chinese pilgrim appears in various spellings. While Beal gives it as Hiuen Tsiang in the above-mentioned work, Thomas Watters entitles his published study of the same Chinese pilgrim: *On Yuan Chwang's Travels in India 629-645 A. D.* 2 vols. (London: Royal Asiatic Society, 1904). And there are other renderings of the Chinese cognomen just as diverse as these. Berthold Laufer, in *Sino-Iranica: Chinese Contributions to the History of Civilization in Ancient Iran with Special Reference to the History of Cultivated Plants & Products* (Chicago, 1919), makes the name Hsüan T'sang. Henry Yule and Arthur Burnell in their previously cited work give it as Hwen T'sang.

term for banana, as he did many other India fruits, where he encountered them.[29]

Now when the countrymen of Hsüan Tsang read his text, they had very little idea what fruits he was talking about, for few of these Indian fruits grew in northern China, nor were many of them afterwards identified even when the northern Chinese became more familiar with tropical products.

Obviously, therefore, the names *mau-che* and *mocha* given the banana by this Chinese pilgrim are taken from its Sanskrit name *moca*. While his writings are important to Buddhist literature, it does not appear that this Indian word *moca* (meaning banana), which in the Wade transliteration becomes *mao-che*, was ever actually identified by either Chinese or Japanese scholars as applying to that fruit. The usual Chinese name for the banana is *kan-chiao*.

An interesting comment on the numerous transliterations of Sanskrit words into Chinese is found in Laufer. He states:

> We must not lose sight of the fact that the equations established in the Chinese-Sanskrit dictionaries are for the greater part merely bookish or lexico-graphical, and do not relate to plant introductions. The Buddhist translators were merely anxious to find a suitable equivalent for an Indian term. This process is radically different from the plant names introduced together with the plants from Iranian, Indian or Southeast-Asiatic regions; here we face living realities, there we have to do with literary productions.[30]

The Indian origin of the word *musa* is recognized by Yule and Burnell. They say:

> The botanical name *Musa* represents the Arabic *mauz* and that again is from the Sanskrit *mocha*.[31]

And Popenoe, whom we quoted earlier in this article, states: "*Musa* comes to us from the Sanskrit *Moca*." [32]

[29] In different places Beal has *moche, meuche, mocha, mauche* and *mau-che*, making the identification as banana or plantain, and Watters has *mocha* or plantain.

[30] Berthold Laufer, *Sino-Iranica: Chinese Contributions to the History of Civilization in Ancient Iran with special reference to the History of Cultivated Plants and Products* (Chicago, 1919), p. 215.

[31] Henry Yule and Arthur Burnell, *op. cit.*, p. 715.

[32] Popenoe, *loc. cit.*

With the earliest references of the Arabs to the banana contained in the accounts of their first voyages to India, Indonesia, and South China, about the middle of the ninth century, and with the earliest notices of bananas being grown in Arabic lands coming long after these dates, there seems no doubt concerning the priority of India in originating the modern generic name so important in botanical classification. To be sure the Arabs gained temporary control of Sind and the lower Indus territory about a century earlier than the dates of their recorded voyages. But again the point must be raised that this conquered country lay outside the natural habitat of bananas and even so the date is about a hundred and twenty years after the observations of the Chinese pilgrim were put to paper. Add to this the fact that the names for banana in Madagascar, on the Zanzibar coast, and stretching across Africa to the Gulf of Guinea are commonly derived from another Sanskrit name for the banana, namely, *kadala,* and the case for a Sanskrit original of *musa* is impressive.

The Name "Banana"

Garcia da Orta, the famous physician and botanist, went from Portugal to India in 1534 and spent the rest of his life in the East. After giving the East Indian names of our fruit, he writes of their further occurrence: "They also have these figs [bananas] in Guinea, where they call them Bananas." [33]

Pigafetta, who published in 1591 the original description of the Guinea Coast by Lopez, says:

> A great quantity of fruit is found here, named 'banana,' by the natives, which I believe to be the same as *Musa* of Alexandria which it resembles both in form and flavor.[34]

More than three centuries later Sir Harry Johnston, in his scientific comparison of the Bantu group of languages, gives many distinct names for our fruit, including *bana* and *banane,* and states

[33] Garcia da Orta, *Colloquies on the Simples and Drugs of India.* Translated, with an introduction and index by Sir Clements Markham. (London: Henry Sotheran & Co., 1913), p. 197.

[34] Fillipo Pigafetta, *A Report on the Kingdom of Congo and of the Surrounding Countries, from the writings of Duarta Lopez* (Rome, 1591), trans. by Margarete Hutchinson (London: Murray, 1881), p. 68.

that the latter name — *banane* — is the origin of the European word "banana." [35]

The name "banana" came into rather general use, perhaps because the Portuguese as great navigators carried this and other economic plants around the world. We find the name in the Moluccas, one of their first colonies, which Purchas visited. Writing of Amboyna, he says: "Amboyna bringeth forth oranges, . . . coquos, bananas and other fruits." [36]

As collateral evidence that the word "banana" came from the Guinea Coast of Africa, there is a considerable use throughout Latin America of the name "Guineo" for one or more kinds of the fruit.

The Name "Plantain"

The original Spanish name for the banana is *platano,* from which the word plantain is obviously derived. It is widely used today throughout Latin America.

Yule and Burnell state:

> The name plantain is no more originally Indian than is banana. It, or rather *platano,* appears to have been the name under which the fruit was first carried to the W. Indies, according to Oviedo, in 1516. The first edition of his book was published in 1526. That author is careful to explain that the plant was improperly so called, as it was quite another thing from the *platanus* described by Pliny. Bluteau says the word is Spanish. We do not know how it came to be applied to Musa. . . . The rapid spread of the plantain or banana in the West, whence both names were carried back to India, is a counterpart to the rapid diffusion of the *ananas* (pineapple) in the Old World of Asia. It would seem from the translation of Mendoca that in his time (1585) the Spaniards had come to use the form *plantano,* which our Englishmen took up as *plantan* and *plantain.*[37]

Travelers returning from the Spanish Main in the seventeenth century wrote of bananas and plantains indiscriminately. And even today in some localities, more or less confusion exists.

[35] Sir Harry Johnston, *A Comparative Study of the Bantu and Semi-Bantu Languages,* 2 vols. (Oxford, 1922), vol. 2, p. 251.

[36] Samuel Purchas, *Purchas His Pilgrimage* (London, 1613), p. 452.

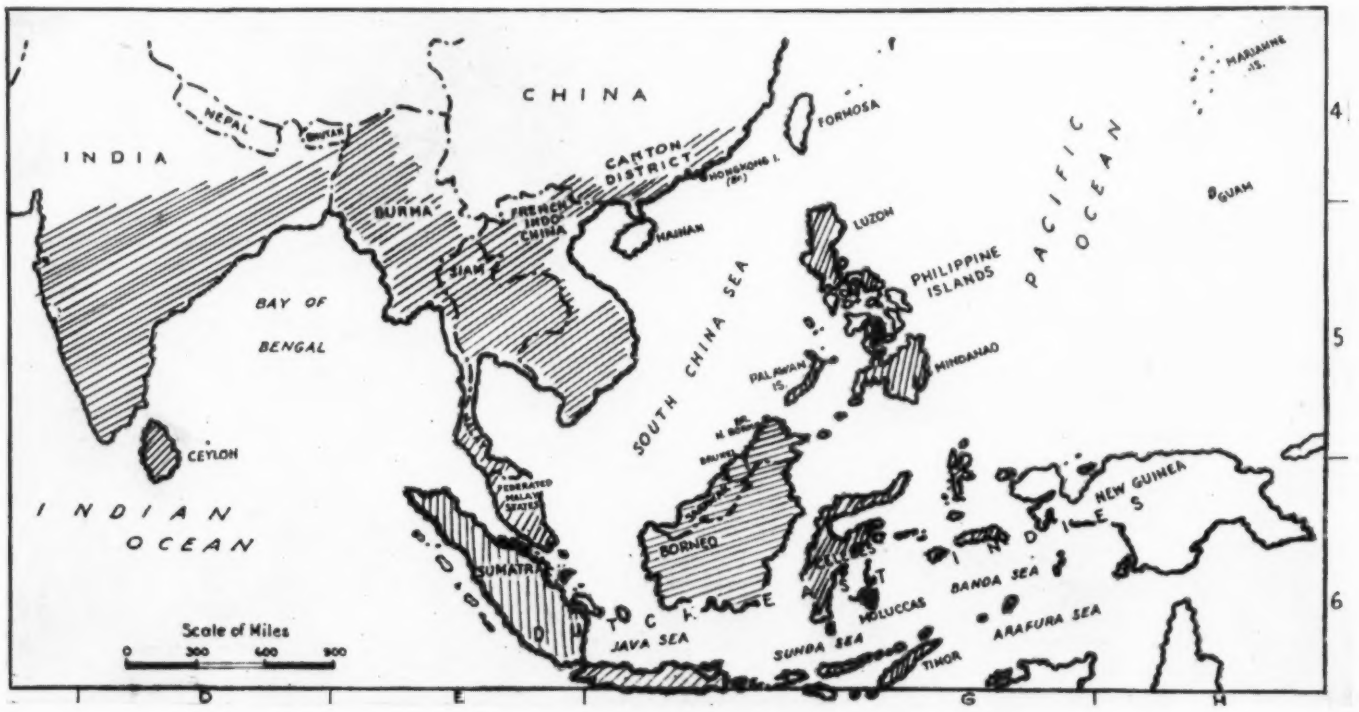
[37] Henry Yule and Arthur Burnell, *op. cit.,* p. 715.

CONCLUSION

It is a fascinating study to plot the banana's migrations through the many centuries, but — to get back to our main theme — we cannot overlook the fact that one must of necessity return to its Asiatic home for the first evidence of its cultivation.

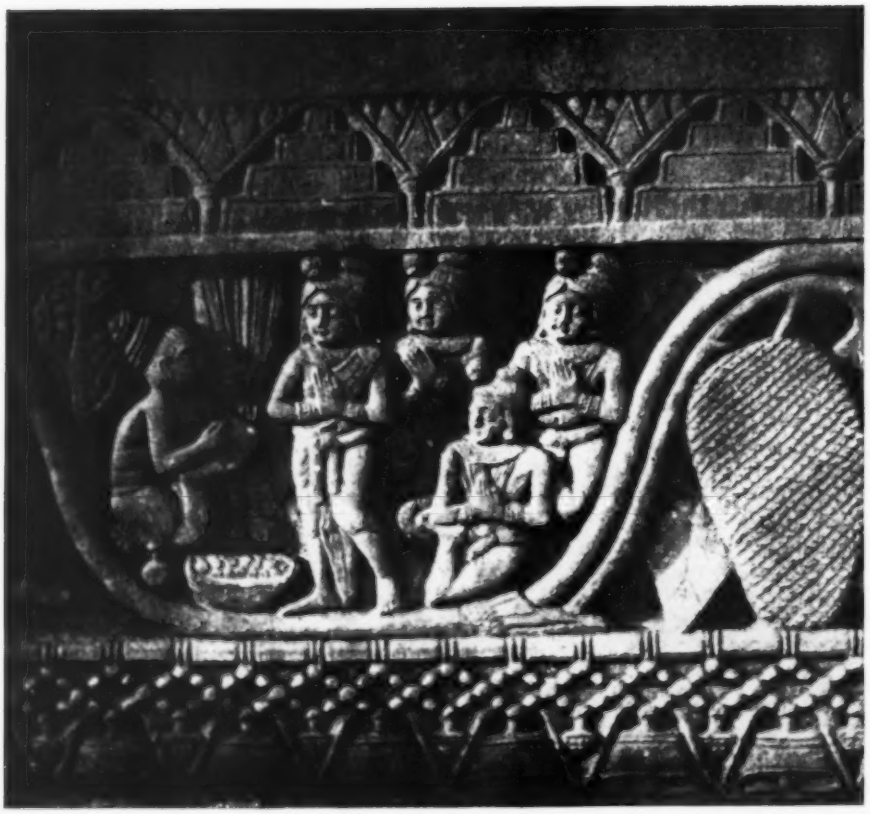
While we have submitted definite proof that the banana was a cultivated plant in tropical India for well over two thousand years, it undoubtedly flourished there, as well as in southeastern Asia and certain adjacent islands, for centuries prior to the existence of any historical records and was found growing in a wild state by the earliest inhabitants.

This field of culture history is challenging and worthy of continuing intensive research, so that we may broaden our knowledge of the history of those food plants which — like the banana — are of economic importance and have come down to us through the ages.

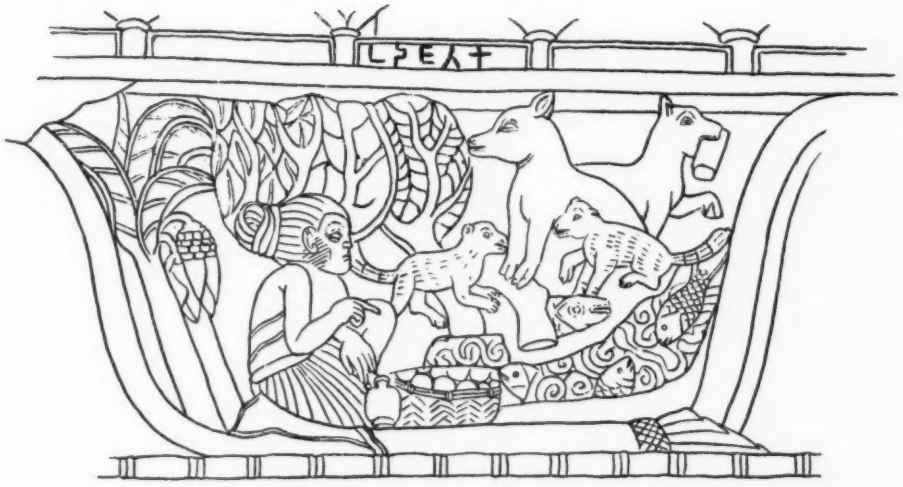


MAP OF THE HOMELAND REGION OF THE EDIBLE BANANA

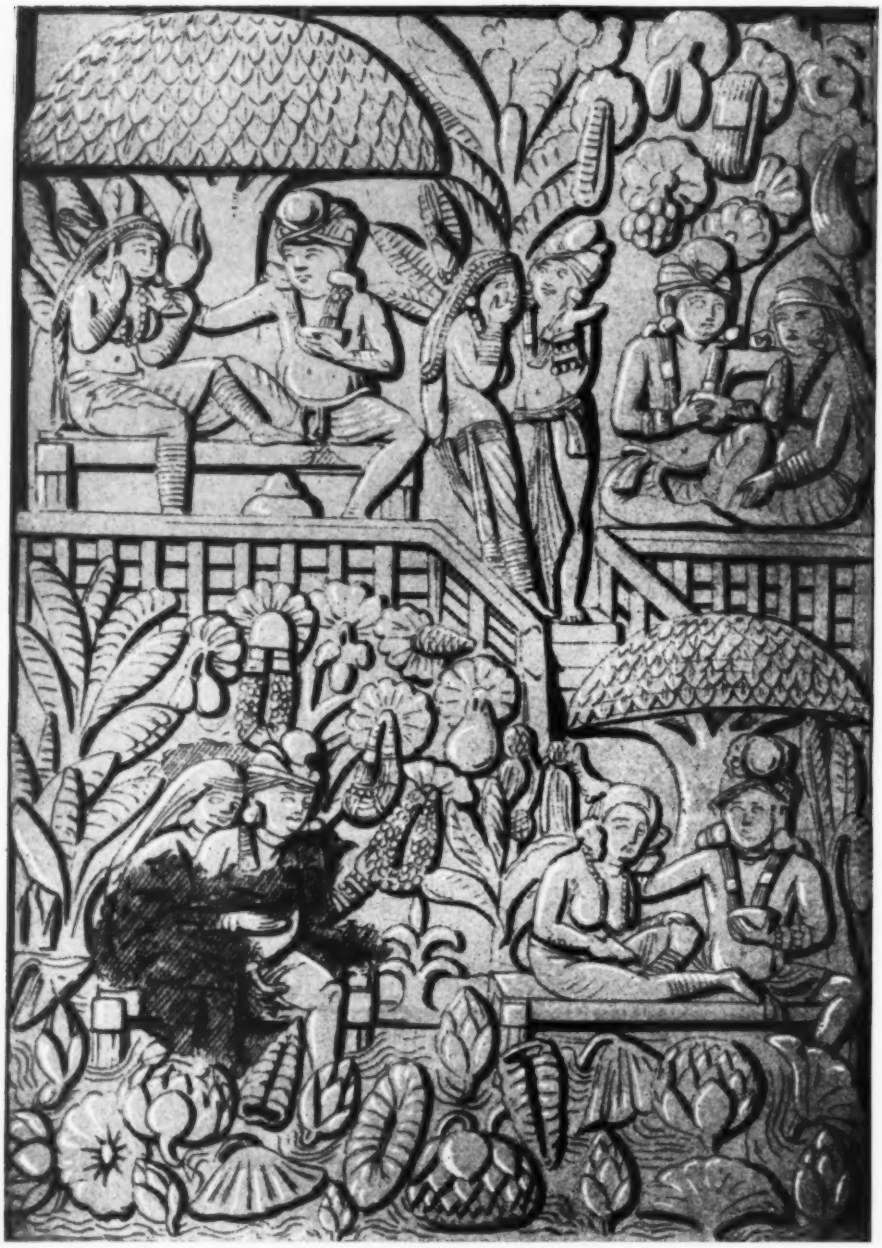
(Shaded portion indicates banana-producing area)



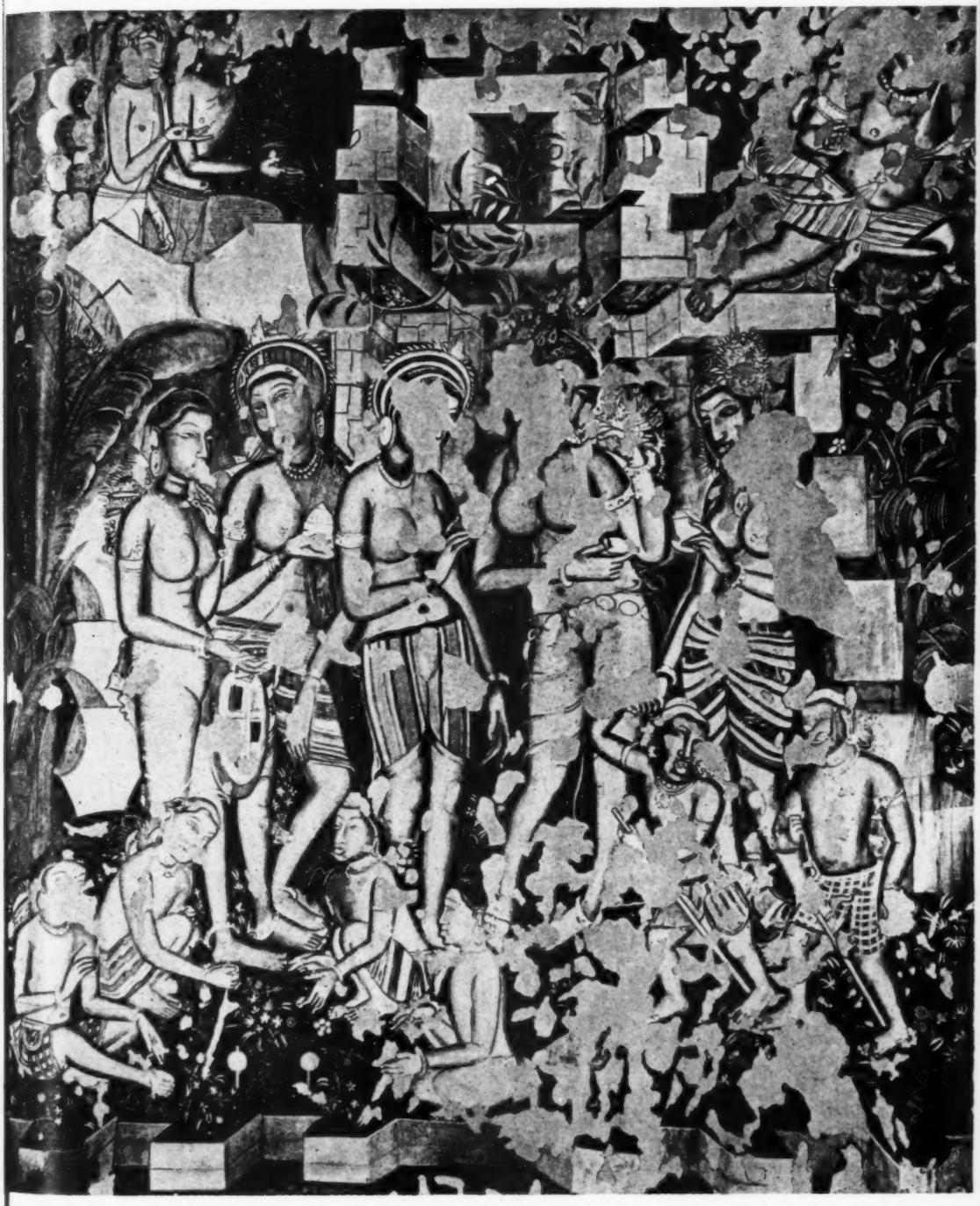
Detail from coping of Stūpa of Bharhut railing (circa 175 B. C.). Plantain (banana) leaves in background between the two figures at left.
Cunningham's Plate LXIV, fig. 6.



Another detail from coping of Barhut Stūpa railing. At left two banana plants with pendant fruit are shown. Drawing, furnished by late Dr. A. K. Coomaraswamy, of Cunningham's Plate LXVI, fig. 2.



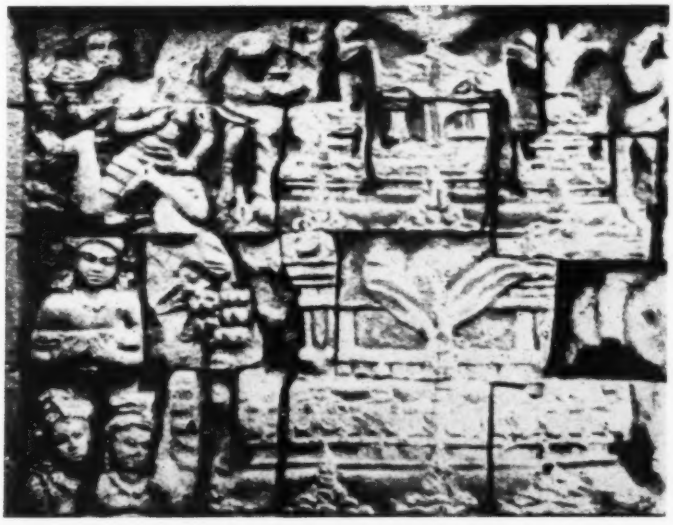
Detail of Stūpa of Sānchi (circa 100 B. C.). Banana Plants at top centre and at left.
Maisey's Plate XXII, fig. 1.



Wall painting in Ajanta Cave-Temple (circa 600 A. D.), found in Cave II. Banana plant appears at left. Griffiths' Plate 31.

Another wall painting—from Ajanta Cave-Temple IX. Young banana plant shown at bottom in the centre. Griffiths' Fig. 67.

1. Detail of Stūpa of Borobodur, Java (circa 850 A. D.). Banana plant in centre. Steinman's Plate II (a) Pisang en Mangga [Banana and Mango].



2. Another detail of Borobodur Stūpa. Steinman's Plate II (b) Bezoek aan den pisangtempel [Visit to the Banana Temple].

Above: A woodcut of the *pa-chiao* (banana) flower.

Below: A woodcut of the *kan-chiao* (banana plant) of Nan-ên-chou, Kwang-tung Province. Reproduced from the original print of a Chêng-lei pên-t'sao of 1249 A. D., in the Library of Congress.